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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,649	01/08/2002	Seung Hee Han	217966US2X	9152

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EXAMINER

MAYEKAR, KISHOR

ART UNIT PAPER NUMBER

1753

DATE MAILED: 07/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
10/038,649

Applicant(s)  
S. HAN et al.

Examiner  
Kishor Mayekar

Art Unit  
1753



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 8, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the meaning of the phrase "Metglass".

### *Claim Objections*

2. Claim 1 is objected to because of the phrase "air containing oxygen". It is preferred to delete "containing oxygen" in the above phrase for clarity. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, the phrase "type", when appended to an otherwise definite term, may render the term indefinite, *Ex parte Copenhaver*, 109 USPQ 118.

Regarding claim 9, the phrase "Metglass" cannot be understood what is meant by Metglass.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

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be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over CONRAD (5,130,003). CONRAD's invention is directed to a "method of supplying electrical power to and controlling corona discharge cells used for the generation of ozone employs a single-cycle discontinuous waveform which is characterized by a fixed pulse width and a variable repetition rate" (see the abstract). CONRAD discloses in Fig. 5 a block diagram of a power supply and corona cell implementing the method which comprises all the structure as claimed. The difference between CONRAD and the above claims is whether CONRAD's apparatus will linearly control the concentration of the ozone being generated. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified CONRAD's teachings because it has been held that the manner in which the an apparatus operates is not germane to the issue of patentability of the apparatus itself, *Ex parte Wikdahl* 10 USPQ 2d 1546, *Ex parte McCullough* 7

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USPQ 2d 1889, *In re Finsterwalder* 168 USPQ 530, *In re Casey* 152 USPQ 235.

As to the subject matter of claim 9, the selection of any of known equivalent transformation means would be within the level of ordinary skill in the art.

7. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over CONRAD '003 as applied to claims 1-4, 8 and 9 above, and further in view of SUZUKI et al. (5,417,936). CONRAD as applied above further discloses that the use of dielectric on both electrode surfaces is known (col. 3, lines 58-62) and in a corona discharge cell ozone is generated by flowing oxygen through a narrow gap between a cooled ground electrode and a dielectric-covered electrode (col. 1, lines 19-25). The difference between CONRAD and the instant claims are the provision of an insulating material (dielectric) on each side of the electrodes and cooling means adjacent to one of each side of the electrodes. SUZUKI shows in an ozone generator the provision of both limitations (see Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified CONRAD's teachings as suggested by SUZUKI because the selection of any

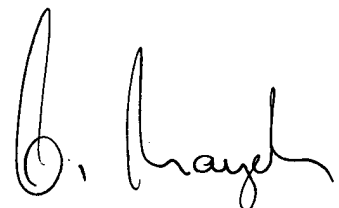
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of known equivalent ozonizer would be within the level of ordinary skill in the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (703) 308-0477. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on (703) 308-3322. The fax phone number for this Group is (703) 872-9310 (non-after finals) or 872-9311 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'K. Mayekar', with a stylized, cursive script.

Kishor Mayekar  
Primary Examiner  
Group 1700

KM  
June 29, 2003